Application Serial No.: 10/500,635
Attorney Docket No.: 2156-340A

Examiner: J. Zimmerman
Art Unit: 2854

REMARKS

Claims 1-17 and 19-28 are currently pending in the present application.

Rejection Under 35 U.S.C. §103(a)

Claims 1-2, 5, 13, 15-17, 19, 22-25, 28 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants'' Admitted Prior Art (AAPA) in view of U.S. Patent No. 6,541,183 to Teng (Teng).

The Examiner asserts that the AAPA teaches "a method for producing a flexographic printing plate, which as a base layer and a layer of a light sensitive material attached to the base layer (citing the specification, page 1, lines 4-11) comprising producing an image in the layer of the light sensitive material by selective crosslinking (citing the specification, page 1, lines 4-10), by insolating zones which are to be crosslinked with amplitude modulated laser light having a wavelength (citing the specification, page 1, lines 17-19) and sweeping the layer of the light sensitive material with the amplitude modulated light to produce crosslinked zones in the layer of light sensitive material without the use of a mask (citing the specification, page 1, lines 17-19) and thereafter removing zones which are not crosslinked to create the image in the solid layer of the light sensitive material (citing the specification, page 1, lines 7-10). The Examiner notes that the AAPA fails to teach that the laser light has a wavelength of 390 to 410 nm, that the solid layer includes at least one photoinitiator sensitive to said laser light at said wavelength or that the photoinitiator undergoes a photoreaction under effect of said laser light to bleach the laser of light sensitive material, wherein the bleaching renders to crosslinked zones transparent to said laser light in order to enable cross-linking throughout the layer of light sensitive material.

Applicants respectfully disagree that the AAPA teaches all of the features asserted by the Examiner to be contained therein. In particular, in accordance with M.P.E.P. §706.02, a statement by an application in the specification identifying the work ***of another*** as "prior art" is an admission which can be relied upon for anticipation and

obviousness determinations. Applicants note that a key requirement for using AAPA is that it must be the work of another.

Turning to Applicants' disclosure which is asserted by the Examiner to be AAPA, it is noted that page 1, lines 4-9 states that "[t]he invention relates to a method for the production of a flexographic printing plate, particularly by digital means, which has a base layer and a layer of lights sensitive material, of the type according to which an image is produced on the light sensitive layer by bringing about a selective crosslinking by insolation of the zones which are to be crosslinked using light with a predetermined wavelength and by removal of the non-crosslinked zones. The invention also relates to a flexographic printing plate obtained according to this method." Thus, these features are not in fact AAPA but only relate to Applicants' own invention.

The Examiner also asserts that the recitation of "by insolating zones with are to be crosslinked with amplitude modulated laser light having a wavelength and sweeping the layer of the light sensitive material with the amplitude modulated laser light to produce crosslinked zones in the layer of light sensitive material without the use of a mask" is AAPA. Applicants disagree and respectfully submit that the disclosure only references producing an image by ***direct writing*** of the photopolymer plate. In contrast, the present invention is ***sweeping*** the layer of light sensitive material with the amplitude modulated laser light, which is not the same as direct writing of the photopolymer plate.

The Examiner acknowledges that AAPA fails to teach that the laser light has a wavelength of 390 to 410 nm, that the solid layer includes at least one photoinitiator sensitive to the laser light at the wavelength or that the photoinitiator undergoes a photoreaction under effect of said laser light to bleach the layer of light sensitive material, wherein the bleaching renders the crosslinked zones transparent to the laser light in order to enable cross-linking through the thickness of the layer of light sensitive material. The Examiner uses Teng to cure the deficiencies of the alleged AAPA and asserts that Teng teaches that violet laser diodes having a wavelength of about 405 nm

may be used because they have lower cost and that a bundle of diodes may be used to provide a higher throughput and concludes that it would have been obvious to one of ordinary skill in the art to use a bundle of violet laser diodes in the method of AAPA to have a lower cost method with higher throughput as taught by Teng.

Applicants respectfully disagree. In particular, on the one hand the Examiner is suggesting using violet laser diodes because of their reduced cost and on the other hand, the Examiner is suggesting using a bundle of violet laser diodes, which as discussed in Teng, is very expensive and complex and it is difficult to achieve sufficient photospeed (see col. 2, lines 38-45). Therefore, Teng does not in fact suggest the use of a bundle of laser diodes because this system is more expensive and had not been shown to achieve sufficient photospeed and in fact teaches away from the use of a bundle of laser diodes because of the increase in cost and complexity. Thus, it is seen that Teng in fact prefers the use of a single violet laser diode. Further, Teng deals with lithographic printing plates which operate using the hydrophobicity of areas of the plate. Lithographic plates and printing are known in the industry to be substantially different from the flexographic plates of the claimed invention.

The Examiner further notes that Teng teaches using a corresponding initiating system for the selected wavelength of light. However, Applicants note that the passage cited by the Examiner relates to the use of materials that are useful as the radiation sensitive layer for plates having a top oleophobic layer which is used for example in lithographic printing elements, not in flexographic printing elements as expressly recited in the claimed invention. Applicants respectfully submit that materials that are useful as the radiation sensitive layer for plates having a top oleophobic layer are very different from materials used in the production of flexographic printing elements and do not suggest that the light sensitive layer of the present invention would have a corresponding initiating system. Therefore, it cannot be shown that Teng teaches using a corresponding initiator system for the selected wavelength of light in accordance with the present invention.

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Regarding claims 5 and 28, Applicants again note that the teachings of Teng relate to lithographic printing elements, not flexographic printing elements and are not relevant to the claimed invention.

In addition, Applicants have also amended claims 1 and 28 to recite that the layer of light sensitive material is swept with laser light to produce crosslinked zones in the layer of light sensitive material **without the use of a mask**. Applicants respectfully submit that Teng discloses that UV irradiation of the printing plate can be accomplished by standard or digital means, which would inherently mean that it is accomplished using a negative or mask (i.e., standard means) or through an *in situ* mask on the surface (i.e., digital means) . Thus, Teng does not describe or suggest directly crosslinking zones of the layer of light sensitive material to create an image in the layer of the light sensitive material without the use of a mask.

As to claim 19, the Examiner asserts that the sleeve is inherently compressible because it is made of polymers, specifically elastomers. Firstly claim 9 recites the feature that the sleeve includes a compressible layer, thus indicating a separate additional alyer to the layers that are already present in the present invention. In addition, Applicants respectfully disagree that elastomers = are necessarily compressible as described in the present invention. Applicants note that the Examiner appears to be equating the term "elastic" with the term "compressible".

As defined in the *American Heritage Dictionary of the English Language*, the term "compress" is defined as "to make more compact by or as if by pressing" and the term "compressible" is defined as "that can be compressed." In contrast, the term "elastic" is defined as "easily resuming original shape after being stretched or expanded; flexible" and also as "springy; rebounding." Thus, the term "elastic" encompasses materials that are capable of resuming their original shape (i.e., a rubber band) but that such elastic materials are not necessarily compressible.

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Applicants respectfully submit that there is no teaching or suggestion in the alleged AAPA that the elastomeric layer is a compressible layer. The only teaching as to the features of compressibility is found in Applicants' own disclosure which is not prior art as to this feature of the invention and it cannot be demonstrated that AAPA and Teng anticipate or render obvious claim 19 of the claimed invention.

Likewise, claims 13, 15-17, 22-25 and 29 depend directly or indirectly from these claims and are also believed to be allowable over the prior art of record.

For all of these reasons claims 1-2, 5, 13, 15-17, 19, 22-25, 28 and 29 are believed to distinguish over AAPA in view of Teng and notice to that effect is earnestly solicited.

Claims 3, 4 and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Teng and further in view of Cohen.

Because claims 1-2, 5, 13, 15-17, 19, 22-25, 28 and 29 are believed to be allowable over the prior art of record for the reasons provided above, claims 3, 4 and 27 which depend therefrom are also believed to be allowable over the prior art of record and notice to that effect is earnestly solicited.

Claims 6-12 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Teng and further in view of Kaczynski.

Regarding claim 6, the Examiner asserts that AAPA and Teng describe all of the features of the claimed invention except that the light sensitive material is a photopolymer containing at least two complementary crosslinking systems and uses Kuczynski to cure the deficiencies asserting that Kuczynski teach the need to adjust the compressibility of a printing plate to increase productivity and improve printing quality and further teach a crosslinking system for flexographic printing plates comprising two complementary systems which allows for adjusting the compressibility of the

photopolymer layer. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to include a complementary crosslinking system in the photopolymer layer to adjust the compressibility of the printing plate and/or increase productivity and/or improve the printing quality.

As to claims 6-8, Applicants respectfully submit that the teachings of Kuczynski referenced by the Examiner relate to complementary crosslinking systems for the compressible layer and **not** to complementary crosslinking systems for the photopolymer layer on top of the compressible layer in which the image is created. Kuczynski does not describe or suggest that the photopolymer layer in which the image is created has complementary crosslinking systems, but only that the compressible layer has complementary crosslinking systems. This is evidenced by at least ¶¶[0190]-[0192] in which Kuczynski discloses that the printing plate can be hardened at a later time to harden the compressible layer. Thus, Kuczynski uses the complementary crosslinking systems to change the properties of the compressible layer but not describe or suggest that it is desirable to change the properties of the photopolymer layer in which the image is created as described and claimed in the present invention and there is no teaching or suggestion in Kuczynski or in Teng that the imageable layer itself has at least two complementary systems as asserted by the Examiner. For these reasons, claims 6-8 are believed to distinguish over AAPA and Teng in view of Kuczynski.

In addition, because claims 1-2, 5-13, 15-16 and 19-29 are believed to be allowable over the prior art of record for the reasons provided above, claims 9-12 and 26, which depends therefrom, is also believed to be allowable over the prior art of record and notice to that effect is earnestly solicited.

Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kuczynski, Teng and AAPA and further in view of Robinson.

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Because claims 1-2, 5, 13, 15-17, 19, 22-25, 28 and 29 are believed to be allowable over the prior art of record for the reasons provided above, claim 14, which depends therefrom is also believed to be allowable over the prior art of record and notice to that effect is earnestly solicited.

Claims 20, 21 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Teng and further in view of Francille.

The Examiner asserts that AAPA in view of Teng describes all of the features of the claimed invention except for including a second sleeve containing an inserted layer for variation of thickness of the sleeve and uses Francille to cure the deficiencies of AAPA and Teng. The Examiner asserts that Francille teaches including a second sleeve to facilitate changing sleeves and that it would have been obvious to one of ordinary skill in the art to include a second sleeve in order to facilitate changing sleeves.

Because claims 1-2, 5, 13, 15-17, 19, 22-25, 28 and 29 are believed to be allowable over the prior art of record for the reasons provided above, claims 20, 21, and 26 which depend therefrom are also believed to be allowable over the prior art of record and notice to that effect is earnestly solicited.

CONCLUSION

Applicants believe that the foregoing is a full and complete response to the Office Action of record. Accordingly, an early and favorable reconsideration of the rejection of the claims is requested. Applicants believe that claims 1-17 and 19-29 are now in condition for allowance and an indication of allowability and an early Notice of Allowance of all of the claims is respectfully requested.

If the Examiner feels that a telephonic interview would be helpful, he is requested to call the undersigned at (203) 575-2648 prior to issuance of the first Office action.

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Respectfully submitted,

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